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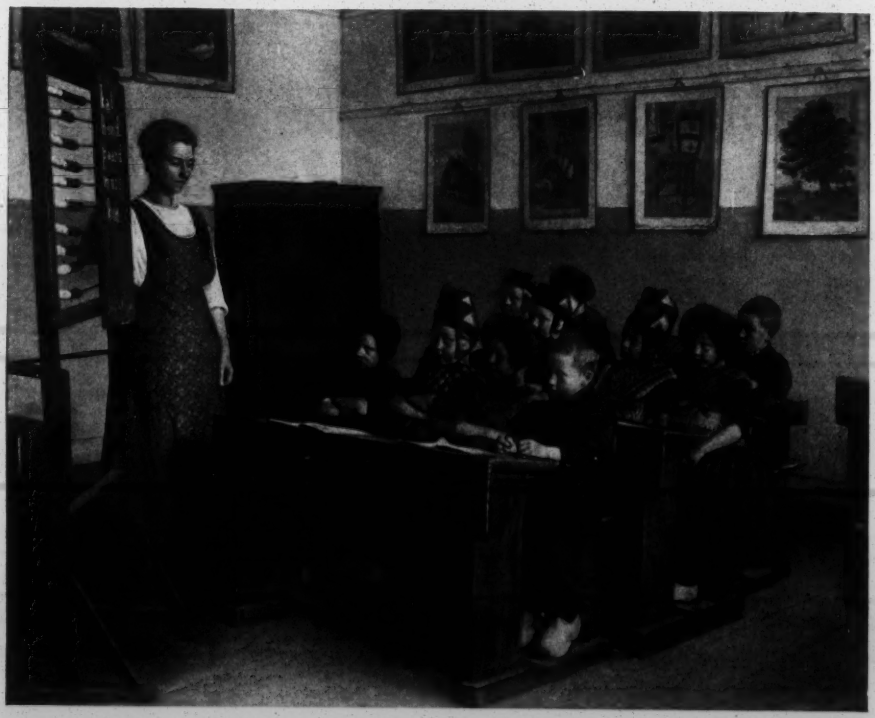

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"WHAT IS THE ENGLISH WORD FOR . . .?"

Tiny Netherlands is surrounded by English, German, French and Flemish-speaking neighbors. It is not unusual for the Dutch school child to have to master from three to four languages in addition to his native tongue. A village school in Staphorst, near the Zuiderzee. Part of this former salt-water gulf is being made a fresh-water lake (See Bulletin No. 1).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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The Netherlands, Gift of the Rhine

THE great dike that last summer divorced the Zuiderzee from the North Sea in Holland has met its first winter storms and has held fast. In a few places the dike had to be reinforced, but there have been no dangerous leaks.

Meanwhile reclamation of 818 square miles of the Zuiderzee is going forward. Engineers estimate that twenty-five years will be needed to dry up this much of the 1,378 square mile area of the former arm of the North Sea. The other 560 square miles will be occupied by fresh-water Ijessel Lake.

A Nation of Persistent Builders

When we look at the map of Europe and see how small a niche Holland, or more formally The Netherlands, occupies, it seems almost incredible that so tiny a nation can push forward so vast an engineering enterprise, and especially so in hard times.

But Holland is a nation of persistent builders. Without quarries it has erected stately buildings and large cities and faced miles of seacoast with protecting pavement (see illustration, next page). Centuries ago, almost without timber, it built navies which disputed for lordship of the seas with the most powerful fleets.

While Holland has lacked raw materials, Dutch ships have kept Dutch factories running, and Dutch ships have carried finished products to distant lands. With neither coal nor oil to drive the needed machines, Holland has made the air blowing over its surface pay toll, and the revolving wings of countless windmills transform this toll into energy.

It is not astonishing that even a sterile country should, by cultivation, produce grain and stock, but it is surprising that Holland should exist, and its existence is a paradox in physical geography.

Before Birth of the Rhine

Before the birth of the Rhine a great part of The Netherlands, as we now see it, was a sea, limited on the German side by a rocky coast which now shows itself in the Teutoburger Wald Hills. The uplifting of the Ardennes inclosed a sea in the interior of Germany which, shielded by the Alps on its southern coast and protected from the cold winds of the north, became full to overflowing from the melting ice. Finally the pent-up waters broke through, and, in the bed thus formed, the Rhine has since been flowing.

With the rush of the waters, masses of rocks were hurried along until the moving force exhausted itself; smaller particles were carried farther, and when the sea was reached its resistance robbed the river of its final burden, and sand-dunes formed the northern boundaries of Holland. The pebbles and grains of sand on which rests the soil of Gelderland and Overyssel and the island of Texel show that their home was the basalt regions of the Rhine.

The result of the conflict between the waters of the rivers and the sea into which they seek to find an outlet is seen in the deltas of our largest streams. The struggles of the Danube have formed about its mouth vast tracts of marsh lands; the Mississippi finds its way into the Gulf of Mexico through six channels, which are with difficulty kept deep enough to carry the discharging flood; the Nile demands a breadth of 120 miles through which to force its outlets into the Mediterranean.

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IN MARKEN GROCERIES ARE DELIVERED BY BOAT

This picturesque island in the Zuiderzee near Volendam will become a part of a newly-reclaimed area, or polder, which will be devoted to farming and grazing. To-day it is one of the few places in The Netherlands where quaint old Dutch costumes are worn, and where life goes on much as it has for centuries. Marken, until the new dike was built, was subject to floods in the winter, and boats were a part of the equipment of almost every household in case of need. The island was a part of the mainland until the thirteenth century, and many of its quaint customs can be traced to this period (See Bulletin No. 1).

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Liechtenstein Becomes "Delaware" of Europe

WITH all of its larger neighbor nations seeking ways and means to end the business depression, Liechtenstein, tiny European principality tucked between Austria and Switzerland, reports a healthy treasury surplus.

Liechtenstein has become a haven for new European corporations. Like our own State of Delaware the principality offers capital a home with a minimum of taxation. In addition, Liechtenstein advertises itself as a snug harbor for people of small incomes and pensions, assuring them that they will not be taxed out of house and home.

Smaller Than District of Columbia

Liechtenstein, which is five square miles smaller than the District of Columbia, is carved out of Austria on the east bank of the Rhine about 30 miles south of Lake Constance.

A single mountain range, with a dozen peaks thrusting their summits more than a mile into the sky, forms Liechtenstein's backbone, with fertile valleys and plains at its feet. American cotton is shipped to its weaving mills and some of the natives are adept pottery makers; but agriculture and dairying, which have been the chief industries of the country for centuries, still occupy most of the 12,000 inhabitants.

Liechtenstein has long been almost self-governing. Its ruling prince was a member of the Upper House of Austria until the early part of this century and largely ruled his domain by telephone from Vienna. It declared its complete independence of Austria in 1918. A Diet of fifteen members, elected by universal suffrage every four years, assists the princely ruler in governing his domain.

Literally in the way of troop movements during the World War, and within earshot of the big guns that devastated broad areas of central Europe, Liechtenstein was unscratched. And there was nothing to stop her invasion, for Liechtenstein has no standing army. Four policemen maintain order throughout the principality.

Her most recent attempts at "war" occurred in 1866 when the Liechtenstein army of eighty men joined hands with Austria, which was settling differences with Prussia. The fourscore men donned their helmets, swung their rifles to their shoulders, and started for the battlefield. But the battle was over before they arrived. The "fighters" returned, stacked their rifles and hung their helmets in the ancient castle at Vaduz, where they now are among the prized mementos of the Liechtensteiners.

Tax Dodgers Do Not Have To Dodge

Liechtenstein ought to be a welcome haven for tax dodgers, because there they would not even have to dodge. Perhaps one of the strangest things that happened to the natives in the last century was the levying of a small tax on the people to maintain dikes to keep the Rhine from overflowing a portion of the lowlands at high water. The rulers of Liechtenstein have always been large landholders; in fact, their aggregate holdings in Europe are larger than Liechtenstein itself, and they have contributed from their private revenues to keep Liechtenstein's government running, instead of levying taxes.

In 1928, Prince Johann II completed one of the longest reigns of a monarch. He took office when Abraham Lincoln was struggling over his law books in Springfield, Illinois. At his death, in 1929, Prince Francis I, the present ruler, stepped to the throne.

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So Holland is the present of the Rhine—that Rhine which rushes over the rocks of Schaffhausen, spreads out boastfully before Mayence, passes tumultuously under the fortress of Ehrenbreitstein, and beats in sonorous cadence at the foot of the Seven Mountains.

Before reaching the Dutch frontier it has lost all the beauty of its banks, and flows in great, lazy curves suggestive of approaching old age. The main branch shamefully disavows its name and throws itself into the Meuse, a river of French origin; the other branch, insulted by the name of Dannebrog Canal, after going nearly to Arnheim, separates into two parts, one emptying into the former Zuiderzee; the other, regaining its early name, though qualified as the Lower Rhine, goes as far as Duurstede, where it divides for the third time.

One of these branches, like a fugitive from justice, changes its name and unites with the Maas near Rotterdam; the other, still clinging to its old name, reaches Utrecht, where for the fourth time it submits to a further partition.

One part, denying its once boasted name, drags itself to Muiden, where it unites with the former Zuiderzee; the other, called the Old Rhine, flows slowly to Leyden, whose streets it languidly crosses. Then, gathered into a canal, it is carried to its death in the North Sea.

Note: Students preparing project assignments about The Netherlands or its possessions should also consult: "A Vacation in Holland," *National Geographic Magazine*, September, 1929; "Singing Towers of Holland and Belgium," March, 1925; "Holland's War with the Sea," March, 1923; and "The Battle-Line of Languages in Western Europe," February, 1923. Dutch possessions overseas: "A Modern Saga of the Seas" (Curaçao and Aruba), December, 1931; "Skypaths Through Latin America" (Dutch Guiana), January, 1931; "Among the Hill Tribes of Sumatra," February, 1930; "Java, Queen of the East Indies," September, 1929; and "Artist Adventures on the Island of Bali," March, 1928.

See also: "Holland's Historic Zuiderzee Becomes Farmland and Lake," GEOGRAPHIC NEWS BULLETINS, Week of October 10, 1932.

Bulletin No. 1, February 27, 1933.

© *Photograph by Dr. J. H. Gore*

HOLLAND PRESENTS A STONY FACE TO THE NORTH SEA

A part of the great dikes, covered with huge stones held in place by piling, that guard thousands of acres of farmland 18 feet and more below the level of the sea. Here the dike is 230 feet in width. All the stones must be brought from distant places, some from Norway and some from Germany. Guards patrol the dikes constantly, because in a single day revengeful waters, breaking through, have taken toll of as many as 40,000 lives.

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The Drowsy Snail, Teaser of French Appetites

WITH the approach of Lent, the lowly snail comes into its own in France, where it ranks high as a teaser of appetites. Snails are gently reared, carefully marketed, skillfully cooked and tastily served in Europe, where they are consumed with the same gusto that Americans display toward the Chincoteague oyster or the Little Neck clam.

Despite its European popularity with gourmets from Caesar's day to the present, the snail is still without honor on the American menu. The average American gulps down a smooth oyster or a slippery clam with zest, but dismisses the snail from his thoughts and his diet with the ruinous adjective, "slimy."

Restaurants Have Special "Snail Waiters"

The Frenchman regards the snail much as Americans do the oyster, as an entrée rather than a staple, and not as the Englishman looks upon his substantial roast beef. That lack of substantiality is one of the chief charms of the snail as an appetizer.

Paris restaurants devote much care to the preparation of their tasty mollusks, which are consumed at the rate of tons a day in Paris alone during the height of the snail season. A "snail waiter" is a feature of every first-class café. He supervises the cleaning of the snails, their replacement—each in its proper shell—and passes judgment on the accompanying sauces. He also takes care of all queries from customers on matters of snail culture and history.

The food value of the snail—it contains 17 per cent nitrogenous matter—and its possible use as an occasional substitute for oysters, which it resembles in flavor when properly prepared, might warrant it a place on the American bill of fare. For the benefit of the Lenten hostess who may dare to vary her usual dinner with a snail hors d'oeuvre, it is reported that snails are easy to prepare for the table.

After an eight hours' soaking in a strong salt solution, they are boiled for five minutes, removed from their shells, fried in butter, and served with a garlic sauce. This is only one of the countless ways of serving snails. Often, after boiling, the snail meat is minced, stuffed back into the shell, and the shell closed with a well-seasoned paste.

How Snails Go to Market

Snails go to market packed in ventilated cases, sacks, or baskets, each holding from 500 to 2,000 specimens. Two kinds of snails are sold by the French merchants, the "large white Bourgogne" and the "small gray." The marketing season for the mollusks is divided into two parts, the first covering late spring and early summer, and the second extending from September 1 to early spring.

During the first season the snails are gathered in field and vineyard after rain or in the early morning. These are in the active stage, and therefore perishable. The second season is separated into two periods. "Glass" snails, so called because of their fragile quality due to an undeveloped epiphragm (or lid), gathered in the spring and kept in pens, make their appearance in the market during September and half of October. Hibernating specimens, reared on snail farms, supply the trade from October 15.

The snail has an interesting life story, though he is dead to the world through a good bit of it. The autumn finds him fat and listless as a result of heavy summer

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While Liechtenstein is not as small in area as Monaco or San Marino, Prince Francis I can view almost his entire domain from the castle near Vaduz, the capital "city." Vaduz is one of Liechtenstein's largest towns, but it has only 1,400 inhabitants. But even the smaller towns are equipped with electricity generated by the Rhine, which is a swift torrent in this region.

The Liechtenstein males must not be misjudged by the ability of many to embroider and the fact that earrings dangle from the ears of some. They are simple, sturdy individuals who have probably adopted their embroidering from the Swiss across the Rhine. It is not clear how the earring-wearing habit was picked up.

Note: See also "Round about Liechtenstein," *National Geographic Magazine*, November, 1927. In the March, 1933, issue the *National Geographic Magazine* will publish some new photographs of the Alps in Switzerland.

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LIECHTENSTEIN HAS A PICTURE CAPITAL

High above Vaduz the fortress-palace of the ruling prince overlooks the Rhine and the mountains of Switzerland. So much of a "neighborhood" is the principality that official bulletins are mere gossip sheets, and a chummy youngster can learn more about a casual visitor than the metropolitan police of larger places do from printed questionnaires.

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Minneapolis, Metropolis of the Northwest

THE interest of American educators is focused this week on Minneapolis, Minnesota, where the 63rd annual meeting of the Department of Superintendence of the National Education Association is being held.

With a population of 465,000, Minneapolis is not only the largest community in the northwest but it is also the Scandinavian metropolis of America. Johnsons, Olsons, Petersons, and Andersons are so numerous that one might almost as well seek the proverbial needle in a haystack as look for one of them in the Minneapolis telephone directory without knowing also the given name and address. There were fifteen Axel Johnsons alone listed in a recent issue.

An Outstanding Milling Center

Minneapolis has long been outstanding as a milling center. Flour mills and grain elevators are perhaps the most prominent features of her skyline to-day, but other temples of commerce raise their heads there, too, for the city is a manufacturing and distributing point for a large surrounding territory.

Some of its products are nationally famous. When you eat breakfast on a winter morning, the chances are nearly even that your cooked cereal came from a Minneapolis factory. And it is not at all improbable that the flour your toast was made with came from there, too. According to a prominent sign on one of the Minneapolis mills, if it doesn't originate in Minneapolis now, "eventually" it will. The butter you use may well have originated in Minnesota, too, for the Gopher State leads the Union in producing that indispensable dairy product.

There are practically no slums in Minneapolis, and a great many of the citizens are owners of trim and prosperous looking homes. After leaving the hustling business district of modern shops, banks, and offices, one may drive for miles over smooth, tree-lined boulevards, or through the 140 magnificent parks which are located about the city.

Park System a Chain of Lakes

The basis of this park system is a chain of eleven lakes, ranging from mere ponds to the broad expanse of Lake Calhoun. They provide a sporting paradise for Minneapolitans, who use them for swimming and sail-boating in summer and for skating and ice-boating in winter.

The "Flour City" is a cultural as well as a commercial center. The Walker Gallery and the Institute of Arts contain many treasures of painting and sculpture, including a number of fine Old Masters. The Minneapolis Symphony Orchestra has held, for a number of years, a high rank in the American music world.

Among the outstanding institutions of higher learning in the United States is the University of Minnesota at Minneapolis. It occupies a site of unusual beauty on the east bank of the Mississippi River, and many of its thousands of students come from outside the State of Minnesota.

Minneapolis was once a great lumber town, but, with the depletion of the State's forests, the industry moved westward. However, many of the large lumber companies still maintain headquarters there.

Of late years, Minnesota's "sky-blue waters" have attracted an ever-increasing throng of visitors. Minneapolis is well situated and is equipped to serve as a base

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feeding. He finally renounces all interest in cabbage leaves and such, and digs himself a comfortable bed four or five inches down among the leaf mold and grass roots. He seals himself up by forming a lid—called the epiphragm—of snaily mortar. Drawing himself far into his shell, he makes an inner papery door and settles down to a "long winter's nap." It is during this sleep that most snails reach market.

Spring finds the survivors "caught up" on sleep and possessing a ravenous appetite. They crash through their doors and feast greedily upon young shoots. In June, as a result of mating, pea-sized, white eggs are laid in holes dug in the ground. The young emerge forty days later, making their first meal on the egg shell that hindered their progress into the snail universe.

Snail farms (escargatoirs) abound in the neighborhood of large cities in France. A farm consists of a good-sized meadow fenced in by boards a foot high to govern the would-be runaways. The owner employs helpers to collect snails from near-by fields and woods, starting about April. The mollusks are placed in one half of the boarded-in meadow and left to graze until July. At this time, they are removed to the other half of the field, which is divided off into squares by more foot-high boards. These squares are bedded with moss on which the snails are placed to fatten on cabbage for three months.

Toward the end of September, they burrow into hibernating quarters and form a hard cover over the mouth of the shell. It is in this state that they are shipped, as they can now be kept until required.

Note: For additional brief references to snails consult: "A Round Trip to Davy Jones' Locker," *National Geographic Magazine*, June, 1931; "Tropical Toy Fishes," March, 1931; "Voyage to the Island Home of Robinson Crusoe," September, 1928; "Exploring the Wonders of the Insect World," July, 1929; and "Life on a Coral Reef," January, 1927. See also "Camargue, the Cowboy Country of Southern France," July, 1922.

Bulletin No. 3, February 27, 1933.

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ON A "SNAIL FARM" IN SOUTHERN FRANCE

This favorite tidbit of the French and Italians is easy to raise. Any bit of meadow land, fenced in by boards a foot high, will do nicely as a "grazing" field. The hat furnishes the yardstick by which to measure the size of the shells.

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Palestine's Dead Sea Produces Life-Giving Salts

EXPLORATIONS in the vicinity of the Dead Sea by a party of scientists from the Pontifical Biblical Institute reveal that the twin wicked cities of Sodom and Gomorrah enjoyed "a certain power, wealth, an era of peace, and a great prosperity." Mural paintings dating back to 2,000 B.C. were found, as well as other evidence of an advanced people.

The Dead Sea, often mentioned in the Bible and Biblical literature, is noted to-day chiefly for its life-giving salts. This deepest hole in the world, outside of ocean basins, was avoided for centuries until an American, W. F. Lynch, wrote an amusing book about his adventures with camels and flatboats around its shores nearly a hundred years ago. His book resulted in a workmanlike survey of the Dead Sea and its amazing properties.

Dead Sea Once Much Larger

Before Bering Strait separated Alaska from Asia and before the Strait of Dover marked off England from France, the Dead Sea was four times its present length and its level was that of the Mediterranean. Most of the salts from that larger sea still remain in the smaller evaporation pan now known as the Dead Sea. From pipes sunk 175 feet below the surface of this natural concentrate made by sun and wind, a new chemical company is now pumping saline water. This super-sea water, so dense that organic life cannot exist in it, is spread out into 500 acres of artificial evaporation pans, surrounded by five miles of dikes. The savage sun does most of the work, but 400 Arab and Jewish laborers are already employed in "mining" the precious salts from the sea.

Four principal salts are being extracted: muriate of potash, used in the manufacture of fertilizer; bromine, used in medicines, photography and dye-making; chloride of magnesium, used in textile and cement manufacture; and common salt, formerly a Turkish monopoly.

From this sea in which nothing can live, finer crops are to come. Salts which failed to heal Herod's illness will help in world healing. Although the pillar of solid salt which is pointed out as "Lot's wife" still rises on the slope of Jebel Usdum, close by the Dead Sea shore, common salt, a by-product of the Palestine Potash Company, sets up a strong competition in the local market.

A Well-Paved "Road to Jericho"

Five and a half miles of new road link the seaside factory with the well-paved "road to Jericho," made famous by the Good Samaritan; but the limiting factor in present operations is not the low price of chemicals but lack of transport. Diesel-engined trucks now haul the chemicals out of the world's deepest land depression and up to the Judean plateau. At Jerusalem they are loaded in trains bound to Egypt, Jaffa or Haifa. Within ten years the new company agreed to produce a thousand tons of potassium chloride a week.

In spite of the almost unlimited supply of Dead Sea salts, there seems little chance of flooding the market unless farm conditions alter radically. Demand for potash has doubled every decade until recent times. At present 3,000,000 tons of muriate of potash a year are produced, principally in Germany and Alsace-Lorraine.

For centuries the Ghor, as the Arabs call the great depression of the Dead Sea, has been an unhealthy locality. The local population—excepting the hordes of pre-war pilgrims and tourists who crowded the Jericho road at Easter time—

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of operations for journeys about the State. Facing Minneapolis, across the Mississippi River, is St. Paul, capital and second largest city in the State. The two communities are often referred to as "The Twin Cities."

Note: For additional Minnesota photographs see: "Seeing America with Lindbergh," *National Geographic Magazine*, January, 1928; "Pirate Rivers and Their Prizes," July, 1926; "The First Alaskan Air Expedition," May, 1922; "Industry's Greatest Asset—Steel," August, 1917; and "How the World Is Fed," January, 1916.

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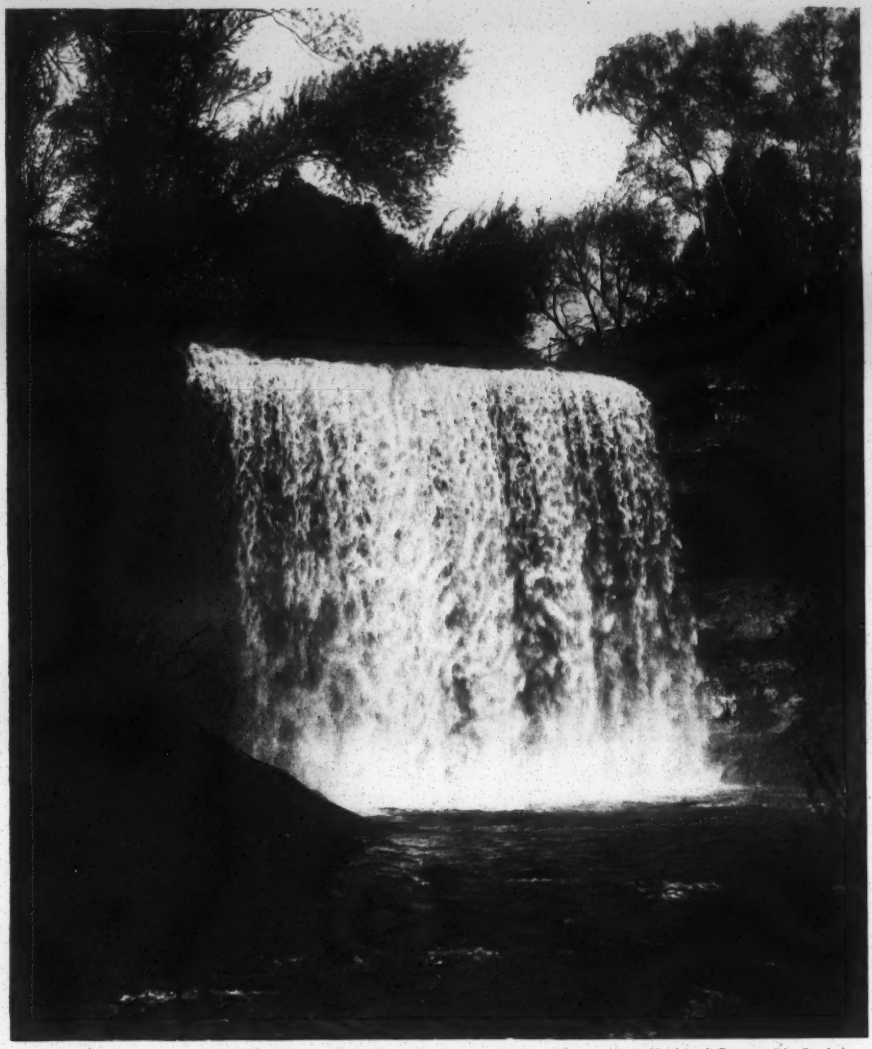

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FALLS OF MINNEHAHA, AS USUALLY IT IS NOT!

Best known of all the scenic attractions of Minneapolis is the famous Falls of Minnehaha. Contrary to this picture, and to that given in Longfellow's classic poem Hiawatha, "Laughing Water" most of the year is nothing more than a trickle of water over the rocks. The photograph above was taken at a time of heavy rains.

was confined to a few miserable Arabs with negroid features. One triumph of the new company has been its health record. The former pest-hole is now a healthy spot in spite of the terrific heat, for malaria, a former scourge, has been abolished.

The millions of tons of salts to be hauled from the Dead Sea will probably avoid the present 4,000-foot climb to Jerusalem by means of a railway which may soon be built up the Jordan Valley to Beisan, historic site where the plain of Esdraelon breaks away to the Ghor. From Beisan the chemicals will go to Haifa, there to be transshipped into ocean liners behind the fine new breakwater which is reaching out from Mount Carmel toward Acre.

Note: For additional data, including natural-color photographs, about the Holy Lands see: "Crusader Castles of the Near East," *National Geographic Magazine*, March, 1931; "Bethlehem and the Christmas Story," December, 1929; "East of Suez to the Mount of the Decalogue," and "Pageant of Jerusalem," December, 1927; "Skirting the Shores of Sunrise," and "Among the Bethlehem Shepherds," December, 1926; "Flying over Egypt, Sinai, and Palestine," September, 1926; "An Old Jewel in the Proper Setting," October, 1918; "Jerusalem's Locust Plague," December, 1915; and "Village Life in the Holy Land," March, 1914. These articles may be consulted in the bound volumes of your school or local library.

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THE RIVER JORDAN, CHIEF FEEDER OF THE DEAD SEA

Near the spot where this photograph was taken the Children of Israel are supposed to have crossed into the Promised Land (Josh. 3). A little farther downstream the soil is heavily alkaline —the "slime pit" into which probably, during their retreat, the kings of Sodom and Gomorrah fell when in full flight from Chedorlaomer and his allies (Gen. 14). Note the arid nature of the hilltops and other land beyond the belt of life-giving water. The Jordan, not a navigable stream, may soon be paralleled with a railway to serve as an outlet for Dead Sea salts.

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